

Recent Papers by IBM Authors

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- Papers are listed alphabetically by name of journal.

A

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Alignment and Wetting Properties of Nematic Liquids, I. Haller (RES Yorktown Hts., NY), *Applied Physics Letters* 24, No. 8, 349-351 (April 15, 1974).

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E

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Subthreshold Design Considerations for Insulated Gate Field-Effect Transistors, R. R. Troutman (SPD Burlington, VT), *IEEE Journal of Solid-State Circuits* SC-9, No. 2, 55-60 (April 1974).

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Nucleation of Small Metal Particles on Ultra-Thin SiO_2 Films on Si, L. Kasprzak (SPD East Fishkill, NY), R. Laibowitz, S. Herd (RES Yorktown Hts., NY), and M. Ohring (Stevens Institute of Technology, Hoboken, NJ), *Thin Solid Films* **22**, No. 2, 189-195 (1974).

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Equation for One-dimensional Vertical Flow of Groundwater, 1. The Rigorous Theory, G. Gambolati (IBM Italy, Venice Scientific Center), *Water Resource Research* **9**, No. 4, 1022-1028 (August 1974).

Equation for One-dimensional Vertical Flow of Groundwater, 2. Validity Range of the Diffusion Equation, G. Gambolati (IBM Italy, Venice Scientific Center), *Water Resource Research* **9**, No. 5, 1385-1395 (October 1973).

Just a Moment!, J. R. Wallis (RES Yorktown Hts., NY), N. C. Matalas (U.S. Geological Survey, Washington, D.C.), and J. R. Slack (RES Yorktown Hts., NY), *Water Resources Research* **10**, No. 2, 211-219 (April 1974).

Mathematical Simulation of the Subsidence of Venice 2. Results, G. Gambolati (IBM Italy, Venice Scientific Center), P. Gatto (National Research Council, Venice, Italy), and R. A. Freeze (RES Yorktown Hts., NY), *Water Resources Research* **10**, No. 3, 563-577 (June 1974).

◆ Book abstracts

OS Data Processing with Review of OS/VS, H. Carroll (SDD Poughkeepsie), John Wiley & Sons, Inc., New York, 1974.

OS Data Processing describes the levels of hardware and software, and the relationships among them, which make up a modern computer system. Using sample programs, mainly in the COBOL language, the text explores operating systems processing through examples and their interpretation. The examples are used to demonstrate what the system does and what the user does, such understanding being viewed as basic to efficient and effective programming. Topics include the historical development of data processing; COBOL, Assembler, Link Editor, and

Execution; OS/360 task management and IOS; OS/VS: OS job management and processing; data management; telecommunications processing; and miscellaneous topics such as SYSGEN, IPL and DOS systems.

Simulación en la Empresa (Simulation Technique in Business), L. F. Escudero (IBM Spain, Madrid Scientific Center) Ediciones Deusto, Bilbao, Spain, 1973.

This book explores the use of simulation in business problems involving queuing processes. Part one describes and compares

methods of generating random numbers and details the basis and operational procedure of Monte Carlo simulation, using numerical examples with normal, Poisson, exponential, hyper-exponential, beta, and uniform probability distributions. The principal characteristics of some widely used simulation codes are described in part two along with numerical applications to illustrate important blocks of the programs. In the final section simulation is applied to actual business cases involving different queuing phenomena, inventory control, project control, and production scheduling. Control programs and interpretation of results are provided for each case.